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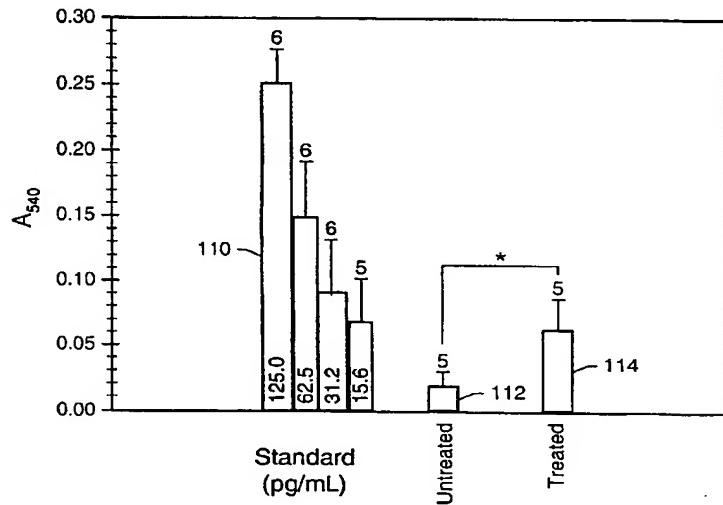
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(54) Title: GAS-PLASMA TREATMENT OF IMPLANTS



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(57) Abstract: An implant for use in biological/biomedical applications may be prepared by subjecting a substrate to a gas-plasma treatment. The substrate may be a biocompatible material, including metals, ceramics, and polymers. More specifically, the substrate may be a bioresorbable polymer. The gas-plasma treatment may include subjecting the substrate to a plasma formed by a reactive gas. The gas-plasma treatment may be performed for a chosen duration at a radio frequency within a temperature range, a pressure range, and a supplied energy range. The substrate may be exposed to living cells, such that some of the living cells become coupled to the substrate. Gas-plasma treatment parameters may be chosen such that the living cells coupled to the treated substrate produce more of a cellular product than living cells coupled to an untreated substrate.